

WHAT IS CLAIMED IS:

1. A surface mounting type planar magnetic device wherein a lower ferrite magnetic film is formed on a substrate; a planar coil is formed on said lower ferrite magnetic film; an upper ferrite magnetic film having an opening above a terminal portion of said planar coil is formed; and an external electrode conductive with said planar coil terminal portion is formed, wherein the planar coil is composed of a Cu conductor and formed by electro plating with two-layered film comprising a film composed of a metal selected from Nb, Ta, Mo and W or alloy constituted of two or more thereof and Cu film as plating foundation.

2. A surface mounting type planar magnetic device wherein a lower ferrite magnetic film is formed on a substrate; a planar coil is formed on said lower ferrite magnetic film; an upper ferrite magnetic film having an opening above a terminal portion of said planar coil is formed; and an external electrode conductive with said planar coil terminal portion is formed, wherein the planar coil is composed of a Cu conductor and wherein average composition of the upper ferrite magnetic film and the lower ferrite magnetic film is Fe_2O_3 : 40 to 50 mol%, ZnO : 15 to 35 mol%, CuO : 0 to 20 mol%, Bi_2O_3 : 0 to 10 mol% while remainder thereof is composed of NiO and unavoidable impurity.

3. A production method of a surface mounting type planar magnetic device wherein upon production of a surface mounting type planar magnetic device wherein a lower ferrite magnetic film is formed on a substrate; a planar coil is formed on said lower ferrite magnetic film; an upper ferrite magnetic film having an opening above a terminal portion of said planar coil is formed; and an external electrode conductive with said planar coil terminal portion is formed, wherein the planar coil is composed of a Cu conductor and a planar coil terminal is subjected to surface treatment prior to coupling of a planar coil terminal portion and an external electrode.

4. A production method of a surface mounting type planar magnetic device wherein upon production of a surface mounting type planar magnetic device wherein a lower ferrite magnetic film is formed on a substrate; a planar coil is formed on said lower ferrite magnetic film; an upper ferrite magnetic film having an opening above a terminal portion of said planar coil is formed; and an external electrode conductive with said planar coil terminal portion is formed, wherein the planar coil is composed of a Cu conductor and an upper ferrite magnetic film is baked at a temperature of 900°C or more to 1050°C or less in the atmosphere of less than 1 vol.% in oxygen concentration after said upper ferrite magnetic film is applied.